LBNL Chemical Inventory

Purpose

The purpose of the site wide chemical inventory is to provide chemical custodians, EH&S staff and emergency response teams with accurate and up to date chemical hazard information. Current chemical inventory reports also must be provided for compliance with DOE and City of Berkeley regulations. Chemical users should be familiar with and understand the nature of the chemical hazards with which they work. Responders need to know the maximum quantity of hazardous materials on-hand at any time in order to respond to incidents with appropriate training, equipment and organizational support. A well maintained chemical inventory can also aid in internal laboratory management of business and research needs.

Responsibilities

Line managers are responsible for entering and deleting hazardous materials from the inventory. All hazardous materials are required to be included in the Chemical Management System (CMS). The EH&S Division maintains a site-wide chemical inventory database program which uses barcodes applied to containers as the unique database identifier. It is the line manager's responsibility to ensure all chemicals are entered into the CMS within 30 days of receipt, and that all chemicals removed from inventory are indicated as disposed from the system within 30 days. Materials with a high through-put rate (such as commonly used organic solvents, acids and bases), should have the maximum quantity that could be present at any point in time entered into the Chemical Inventory database. Contact Chemical Inventory Support at CMS@lbl.gov for information on database implementation and training.

- Tracking Containers
    - Barcodes: The CMS identifies containers (or groups of identical containers) with a barcode containing a six digit ID number. The barcode should be affixed to the container with the ID number completely visible. In the case of small containers. The barcode should be attached vertically to allow for barcode scanning. The container barcodes appear in pairs; one barcode to be affixed to the container and one to be affixed to a chemical inventory data sheet. Barcodes can be obtained through chemical management at x2994, CMS@lbl.gov
    - Required Information
        - Container Barcode (ID Number)
        - Chemical or Product Name
        - Container Size
        - Container Unit (kg, L, mL…)
        - Container Type (glass bottle, can…)
        - Physical State (solid, liquid, gas)
        - Manufacturer
        - Temperature
        - Pressure
        - Building
        - Room
        - Owner

- Inventory Content Specifications
  - Chemicals- All chemicals must be entered into the database with the following exceptions:
    - Biochemical materials such as cell culture media, amino acids, or lipids
    - Research produced chemicals and mixtures
    - Chemicals or Chemical products transferred to secondary (non-manufacturer) containers
    - Radiological Materials
    - Waste Chemicals
  - Consumer Products- Only particularly hazardous or harmful (e.g. toxic, corrosive) consumer products must entered into the database. The following are examples of such products.
    - Bleach
    - Paint thinner
    - Automotive Cleaning Solvents
    - Products under pressure (aerosols)
  - Consumer Adhesives and Sealants- All adhesives and sealants must be inventoried
  - Office Supplies- With the exceptions of sealants, adhesives, and products under pressure (aerosols), office supplies do not need to be entered into the database
  - Mixtures- The chemical name and concentration fields should be filled with data on the most hazardous component (consult MSDS) while the remaining components and respective concentrations should be entered into the comment field. The following are examples of how various mixtures should be entered into the database:
    - Aqueous solutions such as Nitric Acid or Sodium Chloride and their concentration (or molarity) should appear in their respective fields. The concentration of water in a solution is assumed to complete the mixture.
    - Chemical mixtures like Phenol: Chloroform: Isoamyl alcohol should appear with Phenol, the most hazardous component, as the chemical name, listing the other components and their concentrations (or molar ratios) in the comment field.
    - Gas mixtures like 2000ppm of Hydrogen in Argon are entered as ‘Hydrogen’ with ‘2000ppm’ in the concentration field. Inert gases should be entered in the comment field. If more than one component of a gas mixture is hazardous, the most hazardous gas (consult MSDS) should be listed under the chemical name.
- Database Access
  - CMS on the Web can be accessed at **cms.lbl.gov**. Log on using your LDAP (same as e-mail) username and password.
  - Please contact Chemical Inventory Maintenance at x2994, CMS@lbl.gov for database access and information regarding roles and responsibilities.